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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,607	02/04/2000	Robert David Koudelka	MSC-22875-1	2853
24957	7590	04/19/2004	EXAMINER	
NASA JOHNSON SPACE CENTER			BOCURE, TESFALDET	
MAIL CODE HA			ART UNIT	PAPER NUMBER
2101 NASA RD 1			2631	10
HOUSTON, TX 77058			DATE MAILED: 04/19/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/500,607	KOUDELKA, ROBERT DAVID	
	Examiner Tesfaldet Bocure	Art Unit 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 January 2004.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 9-23 is/are allowed.
- 6) Claim(s) 1,2 and 8 is/are rejected.
- 7) Claim(s) 3-7 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Casper et al.** (US patent number 5,963,608, of a record).

**Casper et al.** (**Casper** hereinafter) teaches a multiband phase locking loop comprising: a frequency range detector (not shown in figures 1 and 2) for generating a selected band (see band selection bits inputted from the frequency controller 51 to the PLL in figures 1 and 2) having a frequency range of 50-2500MHz (claimed range in claim 1) for controlling the PLL (19,21,25,33-35) circuit to phase lock the received signal (see input 13 and 41 in figures 1 and 2 respectively) having the selected frequency ranges with that of the internally generated clock signal (claimed synchronizing the input signal in claims 13 and 20) as in claims 1.

**Casper shows** that the sweep control apparatus of figures 1 and 2 **specify** (claimed selecting) as to what frequency should be used from the given (claimed predetermined) frequency ranges disclosed in col. 6, line 62-through col. 7, lines 6. However he fails to show that the frequency range of 50-2500MHz being a plurality of frequency ranges. It would have been obvious to one of an ordinary skill in the art to either to divide the frequency range of 50-250MHz into a plurality of frequency ranges or

extend the frequency range of the 2000MHz frequency range to have more frequency ranges according to the frequency ranges in which the oscillator operates in order to have a wide range of frequencies at the time the invention was made.

Further claims 2, the frequency scaler/divider 72 receives a selection signal (selection N) from the frequency/phase sweep controller logic to **specify** with the octave frequency range of 50-2500MHz contains the embedded clock to be used by the phase detector of the PLL (see elements 80,70, and 55 in fig. 2 and starting Col. 6, line 56 through col. 7, line 50).

Further to claim 8, the phase comparator 80 compares the phase or frequency of the input signal with the adjusted internally generated clock frequency for detecting the received signal (claimed condition).

### ***Response to Amendment***

1. In response to applicant's argument with respect to claim 1 that:

Casper does not disclose a plurality of predetermined frequency ranges for phase locking as is now specifically required by claim 1. Prior to Casper's phase acquisition mode, Casper's frequency range is unknown, rather than predetermined as per claim 1. Once phase acquisition begins, Casper utilizes only single frequency range, which encompasses the frequency uncertainty of the bit rate estimator, (Casper Col. 7, lines 37-40). Therefore, more specifically, Casper does not show frequency range selector for configures the phase detector to produce an output signal when one of the plurality of predetermined frequency ranges, as is now specified in claim 1.

Examiner admits that the Casper reference does not show a plurality of predetermined frequencies as now claimed. However as indicated above with respect to the art rejection to claim1 that: either to divide the frequency range of 50-250MHz into a

plurality of frequency ranges or extend the frequency range of the 2000MHz frequency range is well known depending on the frequency range the oscillator can operate.

As to the argument with respect to frequency selection, as indicated above with respect to the rejection of claim 1, the frequency sweep control circuit 51 generates a selection signal N to specify the frequency in which the oscillator should operate.

#### ***Allowable Subject Matter***

2. Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

3. Claims 9-23 are allowed.

It should be noted that the art rejection to claims 16-22 has been withdrawn and indicated as allowable because of the means-plus-function and the limitations have been interpreted in light of the specification, i.e. invoked the 6<sup>th</sup> paragraph. See fig. 2 and disclosed subject matter with respect to element 22 the claimed means for measuring, element 24 for the claimed means for selecting and element 26 for the claimed means for phase locking

#### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent number 5,304,955 issued to Atriss et al. disclose a

receiver having a PLL comprising a detector for detecting the operating frequency of the oscillator from a predetermined frequency range.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (703) 305-4735. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ghayour, Mohammed can be reached on (703) 306-3034 . The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Tesfalel Bocure  
Primary Examiner  
Art Unit 2631

T.Bocure